

$$\begin{aligned}
\mathcal{L}_{BNN} &= \text{KL}[q(w), p(w | T)] \\
&= \int dw \, q(w) \log \frac{q(w)}{p(w | T)} \\
&= \int dw \, q(w) \log \frac{q(w)p(T)}{p(w)p(T | w)} \\
&= \text{KL}[q(w), p(w)] - \int dw \, q(w) \log p(T | w)
\end{aligned}$$